Pest Alert

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Snails and Slugs of Regulatory Significance to Florida

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INTRODUCTION: Several snail and slug species are of potential agricultural importance to Florida: two species are not yet found in Florida, one is a recent introduction still confined to South Florida and two are established in Florida and present a quarantine issue.

Veronicella sloanei (Cuvier) **Family: Veronicellidae** (Fig. 1)

ECONOMIC IMPORTANCE: This species attacks a wide variety of agricultural and horticultural plants including banana, plantain, various beans and peas, peanut, eggplant, cultivars of *Brassica* (e.g., broccoli, cabbage, cauliflower), carrot, hot and sweet peppers, various citrus species, lettuce, sweet potato, dasheen, eddo, tannia, tomato, and yam.

DISTINGUISHING CHARACTERS: When extended, this slug can attain a length of 12 cm (5 in.). It is highly variable in coloration and positive identification depends on dissection and inspection of the genitalia. It is usually very pale in color, ranging from mottle pale yellow, cream to white. It may have irregular black spotting or speckling all over the dorsal surface that may coalesce into two poorly defined bands running down either side of the body; in the juveniles, these two bands may be clearer and better defined as grey bands, especially anteriorly. Occasionally the snail can be mostly brownish. The only constant color character among different Carribean island populations is the eye stalk which is bluish grey with the tip light brown.

DISTRIBUTION: This species is known from Barbados, Bermuda, Dominica, Dominican Republic, Saint Lucia and St. Vincent. It probably originated in Jamaica.

SURVEY: The best times to hunt for the slug is after rainfall. They rest under boards, logs and other objects lying on the ground. They should not be handled with bare hands as they may carry some nematode diseases.

Amphibulima patula dominicensis (Pilsbry) **Family: Amphibulimidae** (Fig. 2)

ECONOMIC IMPORTANCE: This species has been reported feeding on citrus.

DISTINGUISHING CHARACTERS: Adult snail about 2.5 cm. It is called a slug-like snail because the shell is relatively small in proportion to the body and with one large, ear-like whorl and two small whorls. Color yellowish brown. This species could be confused with the common amber snails (*Succinea*), especially the juveniles. The *Amphibulima* has much coarser sculpture than the amber snails.

DISTRIBUTION: Dominica

SURVEY: These snails are often found on broad leaf plants such as bananas.

Ovachlamys fulgens (Gude) **Family: Helicarionidae (**Fig. 3)

ECONOMIC IMPORTANCE: This species is considered an important orchid pest. It is reported to attack a wide variety of horticultural plants, but the snails are mostly found among soil litter and become dormant during dry periods. It has been found on avocado, mango, *Heliconia* and *Dracaena*; however, little scientific data has been gathered on the biology of this species.

DISTINGUISHING CHARACTERS: These snails are sometimes called “jumping snails” because the tail is modified with a caudal horn and the posterior part of the foot acts as a catapult to push off from contiguous substrates allowing the snail to suddenly move several inches. The adult snail is about 5-7 mm long.

DISTRIBUTION: Costa Rica; Florida (Miami-Dade and Broward counties); Trinidad. The snail is thought to be originally from the Ryukyu Islands.

SURVEY: The snails are mostly found in soil litter and on plants up to at least 8 feet in height in areas of secondary growth and tree plantations. Ideal collecting time is after rainfall.

Zachrysia provisoria (Pfeiffer) **Family: Camaenidae (**Fig. 4)

ECONOMIC IMPORTANCE: A polyphagous snail attacking a wide range of agricultural and horticultural plants. Known hosts include Bougainvillea, various citrus species, crepe myrtle, mango and star fruit (carambola). The snails can rasp the bark and epiderm of cuttings of several plants. This snail is often exported by accident from Florida to other areas and thus poses a quarantine problem for Florida.

DISTINGUISHING CHARACTERS: Shell medium sized (25-30 mm width), globose in shape with 4 to 5 rapidly expanding whorls; shell translucent so that the speckled black mantle shows clearly through the shell of the living animal. The shell is usually thick and strong, but in acidic environments it can be thin and fragile. Body whorl increasing in size more than those of spire; without umbilicus; sculptured with fairly regular, strong, curved axial ribs. Fresh specimens with rich dark tan covering, sometimes with light brown axial streaks. Older specimens are yellowish brown. Lip and columella white. A very similar snail, *Zachrysia trinitaria* (Pfeiffer) has recently been found in South Florida. Also originally from Cuba, the adults can be distinguished from those of *Z. provisoria* by their large size, 1.5 to 2.0 times bigger than *Z. provisoria*.

DISTRIBUTION: Bahamas, Barbados, Cayman Islands, Cuba, Florida (Brevard, Broward, Collier, Miami-Dade, Hillsborough, Monroe, Palm Beach and Pinellas counties), Jamaica, Nevis, Mustique, Puerto Rico and the U.S. Virgin Islands.

SURVEY: It lives among leaf litter and among ornamental plants. More information on this species can be found in Entomology Circular No. 356 (1993) of the Florida Department of Agriculture & Consumer Services, Division of Plant Industry.

Bradybaena similaris (Ferussac) **Family: Bradybaenidae** (Fig. 5)

ECONOMIC IMPORTANCE: Feeds on a wide variety of plants including citrus. This snail is often exported by accident from Florida to other areas and thus poses a quarantine problem for Florida.

DISTINGUISHING CHARACTERS: Width about 12 to 16 mm with 5 ½ whorls. Light brown, often with a single, apical chestnut band. Sculptured with fine, irregular growth lines and fine spiral striae. The lip of the adult is reflected and the columella is partially covering the umbilicus.

DISTRIBUTION: Gulf states; widespread in Florida.

SURVEY: This species is often common with abundant old shells on the ground and among leaf litter, as well as on vegetation and on trees. It is active after rainfall.

Fig. 1. *Veronicella sloanei* (Cuvier).

Fig. 2. *Amphibulima patula dominicensis* (Pilsbry).

Fig. 3. *Ovachlamys fulgens* (Gude).

Fig. 4. *Zachrysia provisoria* (Pfeiffer).

Fig. 5. *Bradybaena similaris* (Ferussac).

Photo credit: Jeffrey Lotz, FDACS-DPI and David Robinson.